

REMARKS

I. Introduction

Claims 1-4 remain pending in the above-identified application, with claims 1 and 4 having been herein amended. In view of the amendments and the following remarks, reconsideration and allowance of the above-captioned application is respectfully requested. No new matter has been added.

II. Drawings

Figures 6-9 stand objected to because they failed to show that they represent prior art. The Examiner has required a proposed replacement figures showing that these figures are prior art. Accordingly, as Applicant herewith submits corrected figures labeled as prior art, it is respectfully requested that the Examiner's objection be withdrawn.

III. Specification

The Examiner has objected to the specification because of the references to the claims contained in the summary. Accordingly, as the specification has been amended to remove these references, it is respectfully requested that the Examiner's objection be withdrawn.

IV. Claim Rejections

A. Rejection Based on 35 U.S.C. § 112

The Examiner has rejected Claims 1-4 under 35 U.S.C. § 112, noting that "the two terminal supports" in line 10 of Claim 1 and "the gap" in line 15 of Claim 1 lack antecedent basis in the claim. Claim 1 has been amended to note the two terminal supports and the gap between

the two terminal supports in lines 3 and 4 of that claim. Accordingly, it is respectfully submitted that the Examiner's rejection under 35 U.S.C. § 112 be withdrawn.

B. The Rejections of Claims 1-4 Under 35 U.S.C. 102(b) Should be Withdrawn

The Examiner has rejected Claims 1-4 as being anticipated by prior art figures 6-9. Applicants respectfully disagree with the Examiner with respect to the rejection and request reconsideration.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). As the Examiner made no statement as to how any of these figures anticipated the claims of the invention, it is demonstrated below that none of the prior art Figures 6-9 disclose all the elements of Claims 1-4.

1. Figures 6-9 do not disclose the Two Terminal Supports and Gap there-between as recited in Claims 1-4

Rejecting Claim 1 under 35 U.S.C. 102(b), the Examiner asserts that prior art Figures 6-9 anticipate the claim. The applicants aver that the critical feature of two terminal supports with a gap there-between is absent in each of these figures.

As claimed in the amended Claim 1, the "coil bobbin" of the present invention comprises, *inter alia*, the elements of "two terminal supports, at a portion of one of the flanges protruding in the outer direction of the diameter direction, with a gap between the two terminal supports, said terminal supports being provided with two terminal pins that are standing." [Emphasis added]. The two terminal supports are formed independent of one another protruding from the flange. Such formation allows for the location of a gap there-between.

Unlike the present invention, none of Figures 6-9 disclose the elements of two distinct terminal supports as required by the amended Claim 1. In Figures 6, 7 and 8, the terminal pins are mounted on a unitary terminal support 106 or 206, respectively. Again, in Figure 9 only a unitary terminal structure 306 is disclosed. This is a critical distinction as there can be no gap in the terminal support through which the wire ends may pass on the way to the terminal pins.

Rather, in Figure 6 the arrangement requires that the wires be wrapped directly from the bobbin onto the terminal supports, and in Figures 7-8 the arrangement requires the wires to be wrapped around the sides of the unitary terminal support. The arrangement in Figure 6 causes the wire ends to rise out of the bobbin body to the pins and thus exposes the wires from the metal core, which can cause damage. The arrangement in Figures 7 and 8 necessarily requires that the wires contact each other twice and thus may cause interference with the metal core. The arrangement of the present invention of two supports with the gap there-between, on the other hand, allows the wires to pass in a manner that does not involve either exposing the wire or wire crossing.

Figure 9 also does not disclose "two terminal supports, ... , with a gap between the two terminal supports..." Rather, Figure 9 discloses a unitary terminal structure 306 with a protrusion 306b extending like a flap, forming a groove 306b-1 for one wire end 309a. The lack of a gap in Figure 9 is essential because the wire structure in that figure discloses the two wire ends 309 being passed from the winding drum portion to the terminal pin 307 opposite the direction from which the wire is wound. In the absence of the protrusion 306b and the engaging protrusion 306a, the wire ends would likely come in contact with one another as they passed to the terminal pins 307. Once again, in contrast the gap between the terminal supports in Claim 1 allows each wire end to be fastened to the terminal support in the same direction from which the wire end is wound. This configuration eliminates the possibility of the wire ends crossing. Further, this

structure is more amenable to automatic winding than is the complicated guide protrusion and engaging protrusion structure of Figure 9.

Thus each of the Figures 6-9 lacks a critical element of Claim 1, that is, the two terminal support structure with a gap there-between. Accordingly, for this reason Claim 1 and its dependent Claims 2-4 should be allowed.

2. Figures 6-9 do not disclose the 360° Wire Wrapping of Claims 1-4

As recited in amended Claim 1, the present invention provides that "each extremity of the wire passes from the winding drum portion through the gap between both terminal supports, is wound into each terminal support, passed through the guide groove, is guided to the terminal pin and is wound and fixed to the terminal pin." Thus by operation the wire ends 9 wrap around 360 degrees on its path to the terminal pin. This results in a coil bobbin structure that is hard to slacken because, during the automatic winding process of wire by automatic winding machine, the wire can be wrapped around the base end portion of the terminal support maintaining a suitable tension. None of the Figures 6-9 has or allows for this feature.

In Figure 6, the wire ends 109a are not wrapped around any structure on their path to the terminal pins 107. Thus, this feature is missing is missing from Figure 6.

In Figures 7-8, the wire ends 209 are wrapped around the sides of the terminal support 206, such that they are wound 180 degrees in one turn before being guided to their respective terminal pins 209. Accordingly, it is difficult to maintain a suitable tension by automatic machine because the wire guided to the terminal portion has to change its direction abruptly toward the terminal pin.

The wire wrapping structure is also not disclosed by Figure 9. The wire end 309a need not make any bend at all as it passes through the guide groove 306b-1 on its path to the terminal

pin 307. Thus, wire end 309a, like the wire ends in Figure 6, is not wound around any support, and thus does not gain the advantage of wrapping around 360 degrees as occurs in Claim 2.

Wire end 309b bends sharply (more than 270 degrees) as it passes through the engaging protrusion 309a, but it bends in the plane of the terminal support rather than in the axial direction of the bobbin. Further, this sharp bend so close to the terminal pin has the same disadvantage of Figure 7-8, in its difficulty in maintaining suitable tension.

Thus, Figures 6-9 lack an essential element, the 360 degree winding, of Claim 1 of the present invention. Accordingly, Claims 1-4 should be allowed.

3. Figures 6-9 do not disclose the Receiving Portion and Concave Portion of Claim 4

Amended Claim 4 of the present invention requires that "at the base end portion of each terminal support, a receiving portion is installed horizontally to provide for a concave portion to connect to where the guide groove opens." [Emphasis added]. The receiving portion and concave portion allow the wire to be guided along the terminal support to the guide groove, without allowing any slackening of the wire.

These features are not present in Figures 6-9. In Figures 6, 7 and 8 there is no receiving portion and no concave portion.

Figure 9 also has no receiving portion and no concave portion on its terminal support leading to a guide groove. The wire ends 309 are simply led straight from the coil body to the guide groove 306b-1 and the engaging protrusion 306a, and further guided to the terminal pins 307.

Thus Figures 6-9 lack crucial elements of Claim 4. Accordingly, Claim 4 should be allowed.

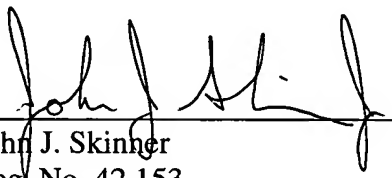
V. CONCLUSION

In light of the above remarks, it is respectfully submitted that all of the pending Claims 1-4 are allowable. All issues raised by the examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

A check in the amount of \$120.00 in payment of the extension fee is transmitted herewith. The Commissioner is hereby authorized to charge payment of any additional extension fee required under 37 C.F.R. § 1.17 in connection with the paper(s) transmitted herewith, or credit any overpayment of same, to Deposit Account No. 50-0675, Order No. 051319-0077.

Respectfully submitted,

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